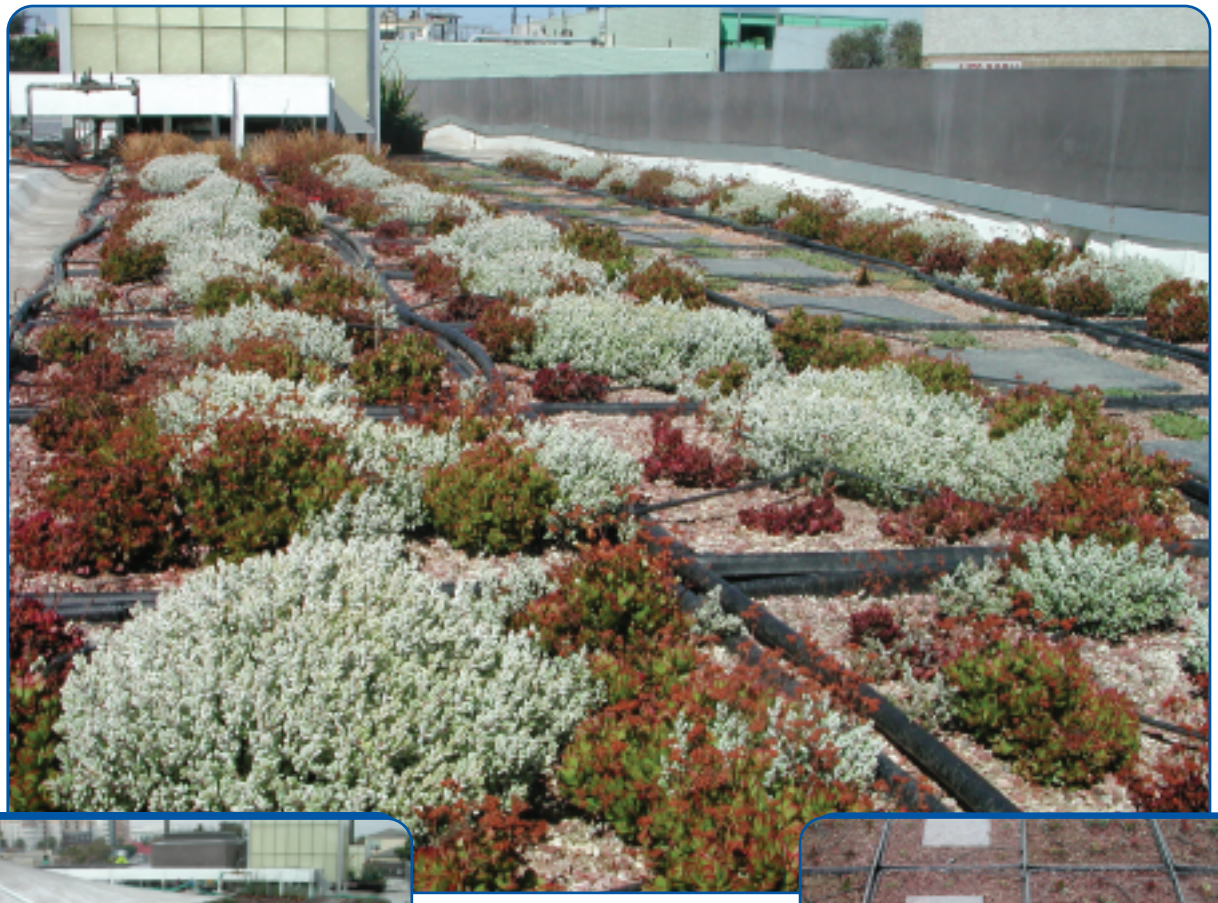
DRAMM IRRIGATION SYSTEMS

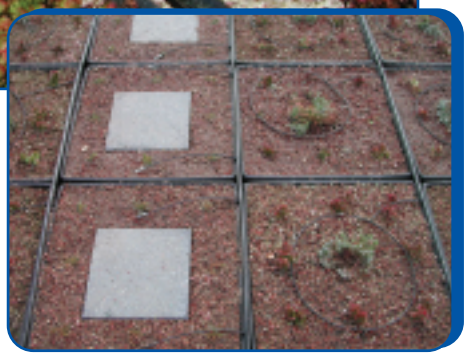
for

Green Roof Designs

DRAMM IRRIGATION SYSTEM DESIGN

Dramm Irrigation System design and installation for Green Roof Designs™





The Dramm Pressure Compensated Irrigation System is designed for even watering of containerized plants. Each irrigation ring is supplied from a pressure compensated emitter, which emits a constant flow of water (8 liters or 2 gallons per hour) over a 15 to 60 PSI range of pressures. By compensating for pressure and flow at the ring, manifolds can be designed for ease of installation, appearance, and effective use of materials.

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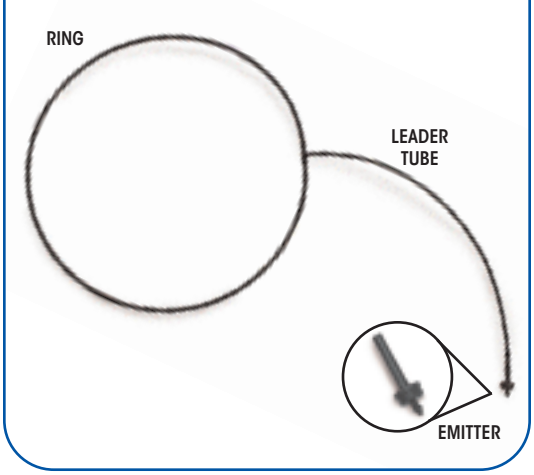
COMPONENTS

Ring Assembly



The ring is the base unit of the Irrigation System. Two rings with compensated 8L/HR or 4 L/HR emitters are used per extensive container. The leader tube which is the tube between the ring and the emitter is available in different lengths. (A different length leader would need to be specified at time of quotation and ordering)

Manifold Components

The manifold System consists of 16mm Polyethylene tubing and various Easyloc™ style fittings which allow for flexibility in manifold design.

POLYETHYLENE MANIFOLD TUBING

Quick Punch

The Quick Punch Tool is constructed from lightweight plastic. Easy-to-use punch for punching holes into manifold tubing. Place tubing into cut-out & firmly press handle together. The Quick Punch will pierce the poly tubing in one leak-free operation.

MANIFOLD DESIGN

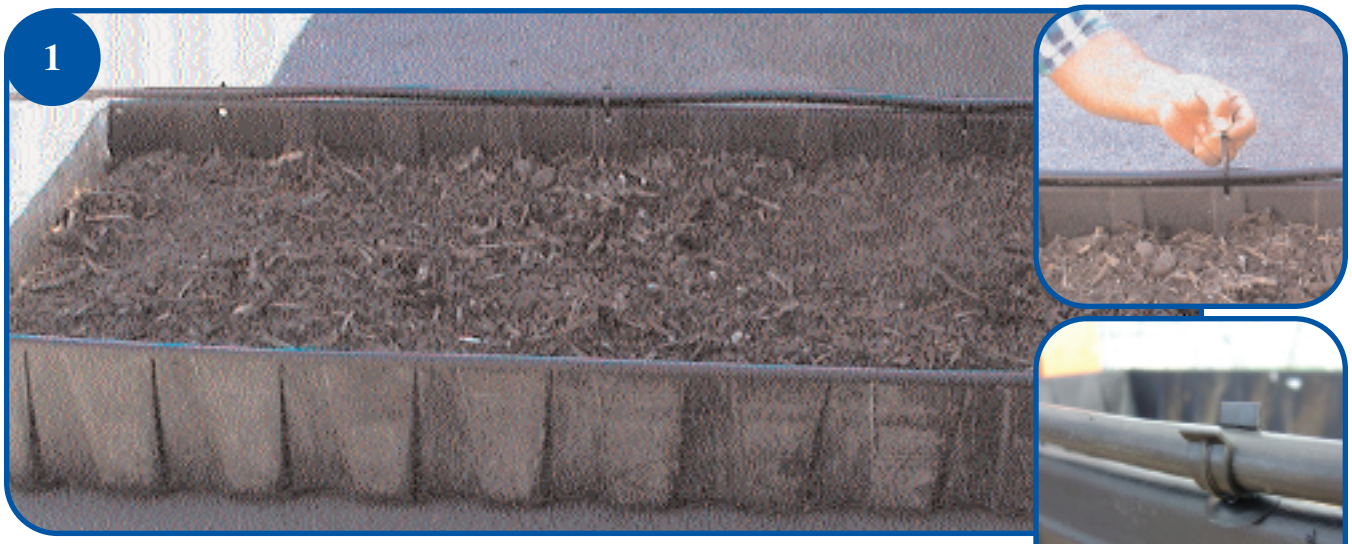
Each 16mm manifold can supply up to 124 - 8L/HR rings (62 extensive containers). The water supply for each manifold should not exceed 5 GPM and water pressure not to exceed 60PSI at the head. If water pressure does exceed 60PSI a regulator is required. Roof systems containing more than 62 extensive containers (124 rings) will require more than one manifold to maintain equal water volume throughout the system.

SYSTEM INSTALLATION

The following pages show the steps of system installation. The installation is simple and is done during installation of the Roof containers.

MANIFOLD INSTALLATION

1



The manifold can be run along the edge of the container and fastened with cable ties or tube clips to keep it in place.

2

On a roof top system we will be dealing with a slope for waste water run-off. The rings should be placed down stream from the position of the emitter which is punched into the manifold. Lay out the rings in the container before punching the hole in the manifold for the emitter.

MANIFOLD INSTALLATION

3

Using the Hand Punch tool, punch a hole in the manifold for the emitter. (Pre-punched tubing is also available)

4

Push the emitter into the manifold. To remove emitter, CUT OFF THE BARB and re-insert new emitter into existing hole. DO NOT PULL OUT DEFECTIVE EMITTER FROM POLYPIPE.

5

A

Flush the manifold of debris before closing the end. Then use the 16mm figure 8 clip to close the end of manifold runs (Fig A). At seasons close, the ends may be opened and the system drained.

CAMOUFLAGING THE IRRIGATION SYSTEM

A variety of strategies can be used to hide the irrigation system. The manifold can be run as part of the container bead, or it can be hidden between the containers and routed to the surface where needed.

DRAMM SYSTEM CONTROLS

The irrigation system can be controlled by any means, from a manual valve to computer controls.

COMPONENT SPECS

ITTSL16

MODEL # ITTSL16

DESCRIPTION 16mm EASYLOC™ TEE-
Used for T-branches in manifold layout– 50/bag

ITESL16

MODEL # ITESL16

DESCRIPTION 16mm EASYLOC™ ELBOW-
Used for 90° corners in manifold layout– 50/bag

ITF075SL16

MODEL # ITF075SL16

DESCRIPTION 3/4" mpt x16mm EASYLOC FITTING
Used to connect manifold to valve or other supply connections– 50/bag

600-AP8

MODEL # 600–AP8

DESCRIPTION 16mm FIGURE 8 CLOSURE
Used to close end of manifolds– 100/bag

ITVO75SL16

MODEL # ITVO75SL16

DESCRIPTION EASYLOC™ VALVE
3/4" MPT x 16mm
Easyloc™ valve, ideal for flushing out line as a substitute for 600AP8

PCR14-8

MODEL # PCR14-8 (8 L/HR or 4L/HR)
PCR14-4 (8 L/HR or 4L/HR)

DESCRIPTION 14" RING WITH
8" or 4" LEADER & 8 or 4L/HR EMITTER
Supplies water to plants in extensive containers Other leader lengths must be specified when ordering

PE16-_ _ _ _

MODEL # PE16500– 500 Feet of Tubing
PE161000– 1000 Feet of Tubing
PE161000PP24- 1000 Feet of tubing /w 24" o/c prepunched holes

DESCRIPTION 16mm POLYETHYLENE MANIFOLD TUBING
Supplies water to extensive containers

PUNCH

MODEL # PUNCH

DESCRIPTION QUICK PUNCH
Used to pierce manifold tubing

ALFS75150-S

MODEL # ALFS75150-S

DESCRIPTION FILTER
3/4" Cartridge Filter, 100 micron,
18 gpm

SVB075–M

MODEL # SVB075–M

DESCRIPTION 3/4" PRO-SERIES SOLENOID VALVE
24v AC with manual override
switch and flow control
Available in 1". 1.5", & 2" sizes

GVB075

MODEL # GVB075

DESCRIPTION 3/4" PRO-SERIES AUTOVALVE™
Solenoid valve complete with
Programmable controller 12v DC
Up to 3 start times per day

9 volt battery operated, unit has
internal back-up battery to keep
program safe

D530-008

MODEL # D530-008

DESCRIPTION SWIVEL COUPLING
3/4" FHT X 3/4" FPT PVC swivel
transfer coupling

RPIC-03

MODEL # RPIC-03

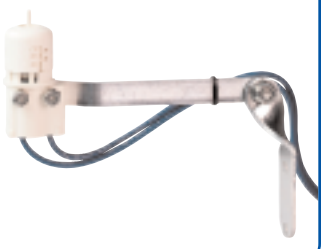
DESCRIPTION
RAINPRO IRRIGATION CONTROLLER
3 station Outdoor Irrigation Control
120v
Expandable to 7, 11, 15 Stations
3 Independent Programs
Odd/Even Day of Week, Calendar
Options

RPIC-M4

MODEL # RPIC-M4

DESCRIPTION
CONTROLLER MODULE
4 Valve Expansion Module
Just Plug into Control Board
Works with RPIC-03

RPRS



MODEL # RPRS

DESCRIPTION
RAIN SENSOR
works with RPIC-03
Reduces the Use of Water in
Wet Weather Conditions

TTC16

MODEL # TTC16

DESCRIPTION 16mm Tube Clip
Used for Fastening Polyethylene Tubing to the Module

T12-007

MODEL # T12-007

DESCRIPTION IN-LINE SPRING CHECK VALVE
3/4" PVC Threaded

PRV-075-P-B

MODEL # PRV075-P-B

DESCRIPTION 3/4" DIRECT ACTING PRESSURE REGULATOR
3/4" Female Pipe Thread
Pressure Adjustment Range 12-35 PSI
Max. Inlet Pressure 125 PSI

400PL

MODEL # 400PL

DESCRIPTION 400 WATER BREAKER
Fast, Full Flow Watering. Gentle Flow Won't Damage Plants.
Made in USA

124-G

MODEL # 124-G

DESCRIPTION HANDI–REACH™ HANDLES
24″ Handle Eliminates Stretching & Stooping Associated with Hand Watering. Made in USA from Extruded Aluminum & Brass

17003

MODEL # 17003

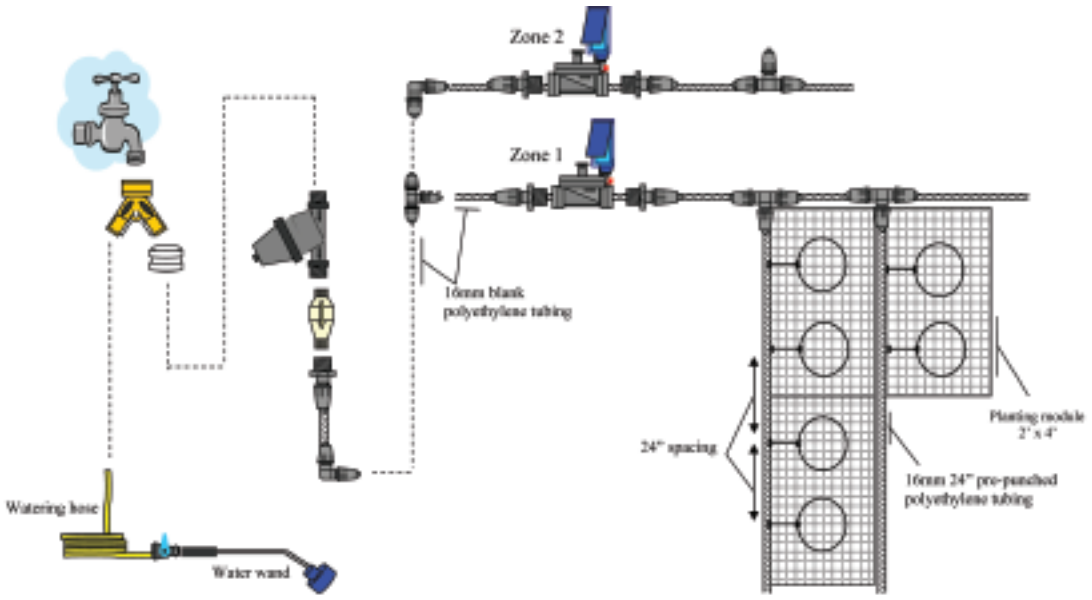
DESCRIPTION PREMIUM RUBBER HOSE
50ft Rubber Hose. 5/8″ Diameter for Full Flow. Kink–Resistant, with Crush-Proof Couplings. Made in USA

13351

MODEL # 13351

DESCRIPTION BRASS TWIN SHUT-OFF VALVE
Water 2 Places at One Time
Durable Brass

MANIFOLD SUPPLY FOR GREEN ROOF SYSTEMS



Manifold Supply system for Green roof irrigation system **Option A**		Revision	Drumm Corporation 2000 North 18th Street Po Box 1980 Manitowoc, WI. 54221-1960 920-684-227 Fax: 920-684-4499 Canadian Office Fenwick, Ontario 905-892-5644 Fax: 905-892-3328
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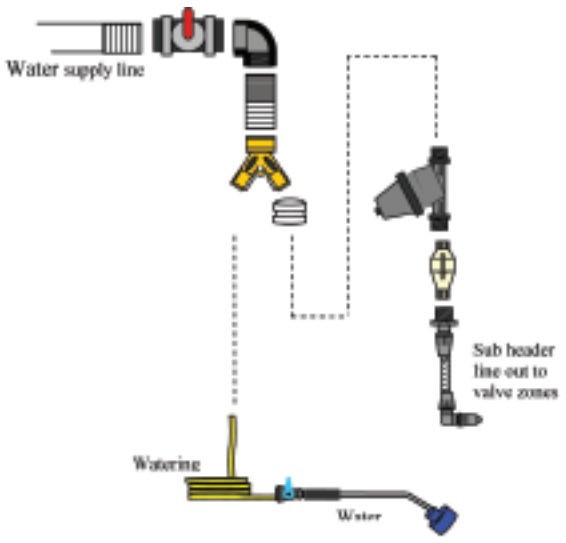

Manifold Supply system for Green roof irrigation system **Option B**		Revision	Drumm Corporation 2000 North 18th Street Po Box 1980 Manitowoc, WI. 54221-1960 920-684-227 Fax: 920-684-4499 Canadian Office Fenwick, Ontario 905-892-5644 Fax: 905-892-3328
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